

# Landfill Advisory Committee

## Scoring Criteria Description and Explanations

### Landfill Advisory Committee Meeting 5

February 7, 2022

#### Objective Scoring Criteria

##### 1. Landfill Capacity

**Description:** Total amount of waste that can be placed in the landfill

**Explanation:** The City and County of Honolulu (CCH), Department of Environmental Services (ENV) intends to develop a new landfill with a minimum 20 years of site life, which equates to an estimated 21.5 million cubic yards of disposal capacity. This estimated disposal capacity is based on standard assumptions, including projected waste generation and recycling rates, waste compaction densities, and the estimated closure date of the existing construction and demolition landfill, PVT Landfill. A larger landfill would typically require more land and capital costs; however, due to the lengthy permitting and development timeline for a new landfill (roughly 10 years), the anticipated high cost associated with siting and development, as well as an increasingly limited amount of land available for landfills, among several other factors, it is impractical to design a landfill with a lifespan of less than 20 years.

##### 2. Land Acquisition, Landfill Development, and Roadway Improvement and Infrastructure Costs

**Description:** Cost to acquire land, develop the landfill site, and complete all required roadway and infrastructure improvements to support the landfill

**Explanation:** ENV anticipates that developing a new landfill will require a significant financial investment by the CCH. Total development cost estimates will be completed for each landfill site, including acquisition, design, permitting, and construction costs, as well as required ancillary infrastructure improvements in the vicinity of the site to support heavy truck traffic. Differences in development cost estimates for each site reflects variations in site conditions and locations.

##### 3. Time to Acquire Land and Develop Landfill

**Description:** Time to complete the land acquisition process and develop the landfill site for waste acceptance

**Explanation:** The land acquisition process will need to be completed either through condemnation, direct purchase, or a long-term lease. The time it will take to acquire and develop each site will be estimated by ENV and its consultants. Development planning and design is closely tied to the land acquisition method and timeline. When acquiring and

developing the landfill site, ENV will strive to create scheduling efficiencies to reduce the project timeline to the greatest extent possible. The current landfill is mandated to stop accepting waste on March 2, 2028.

#### **4. Location Relative to H-POWER**

**Description:** Driving distance to/from H-POWER

**Explanation:** The location of the new landfill directly affects ENV's operational and contractual costs, including the costs to transport waste, ash, and residue from H-POWER. If the landfill is more than 12 miles from H-POWER, by contract, ENV incurs additional ash and residue hauling fees. Additionally, the further away the landfill is from population centers, transportation of waste to the landfill when necessary will be more costly.

#### **5. Effect on Traffic and Roadway System**

**Description:** The landfill's effect on traffic and the roadway system

**Explanation:** ENV anticipates increased traffic and roadway system impacts in the vicinity of the new landfill site, as well as between the new landfill site and H-POWER. The extent of roadway system impacts are commensurate with the driving distances between H-POWER and the landfill. Additionally, increased waste hauler traffic could impact local traffic and roadway systems. Actual impacts would be addressed during the Environmental Impact Statement process.

#### **6. Effect of Precipitation on Landfill Operations**

**Description:** Effect of precipitation on operation of the landfill

**Explanation:** The amount of precipitation a landfill site receives directly impacts landfilling operations and costs, and could increase environmental and human health risks. The more precipitation a landfill site receives, the greater the likelihood of challenging operational conditions and environmental effects related to stormwater runoff and leachate management.

#### **7. Location with regard to Important Agricultural Lands of the Hawai'i Land Use Commission**

**Description:** Location of the landfill site within or outside of Important Agricultural Lands (IAL) designated by the Hawai'i Land Use Commission

**Explanation:** A landfill site located in IAL areas will limit the use of that land for agricultural purposes. Additionally, due to restrictive land use requirements, permitting and developing a landfill site may become more challenging the closer that site is to IAL.

#### **8. Location with regard to the Board of Water Supply No Pass Zone**

**Description:** Location of the landfill site within or outside of the No Pass Zone established by the Board of Water Supply

**Explanation:** The No Pass Zone is defined as “areas in which the installation of waste disposal facilities, which may contaminate groundwater resources used or expected to be used for domestic water supplies, shall be prohibited”.

#### **9. Municipal Water Wells within 1,000 feet**

**Description:** Municipal water wells within a 1,000 feet buffer zone

**Explanation:** Standard solid waste industry practice is not to site a landfill in close proximity to a municipal or community water well. The United States Environmental Protection Agency does not regulate set-back requirements; however, many states have established their own minimum requirements. The Hawai‘i Wellhead Protection Program requires a minimum 1,000-foot set-back from potential contaminating activities, such as a landfill site.

### **Subjective Scoring Criteria**

#### **10. Significance of Land Use Displacement**

**Description:** Significance of displacement of existing land use

**Explanation:** Land use information identified through review of various Hawai‘i and CCH department records for the landfill site is provided for reference and consideration.

#### **11. Significance of Proximity to Ecologically Important Areas**

**Description:** Significance of the direct and indirect effects to identified ecologically important areas within a one-half-mile buffer zone

**Explanation:** A list of ecologically important areas as identified through review of various federal agency and Hawai‘i department records within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

#### **12. Significance of Proximity to Nearby Surface Water**

**Description:** Significance of the direct and indirect effects to identified surface water bodies within a one-half-mile buffer zone

**Explanation:** A list of surface water bodies as identified through review of various federal agency and Hawai‘i department records within a one-half-mile buffer of the landfill site is provided for reference and consideration.

#### **13. Significance of Proximity to Nearby Archaeological and Cultural Resources**

**Description:** Significance of the direct and indirect effects to identified archeological and cultural resources within a one-half-mile buffer zone

**Explanation:** A list of archaeological and cultural resources as identified through review of State of Hawai‘i Department of Land and Natural Resources, State Historic Preservation Division records within the landfill site boundary and within one-half-mile buffer of the site is provided for reference and consideration.

#### **14. Significance of Proximity to Nearby Parks and Recreation Facilities**

**Description:** Significance of the direct and indirect effects to identified parks and recreation facilities within a one-half-mile buffer zone

**Explanation:** A list of parks and recreation facilities as identified through review of various federal agency, and Hawai‘i and CCH department records within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

#### **15. Significance of Proximity to Nearby Public Commercial Facilities**

**Description:** Significance of the direct and indirect effects to identified public use commercial facilities within a one-half-mile buffer zone

**Explanation:** A list of public use commercial facilities as identified through review of CCH Department of Planning and Permitting records within a one-half-mile buffer zone of the landfill site is provided for reference and consideration.

#### **16. Environmental Justice: Significance of Location Relative to Identified Community Disamenities**

**Description:** Significance of the location of the landfill site relative to identified community disamenities

**Explanation:** A list of operational community disamenities, including landfills, power plants, wastewater treatment plants, and petroleum refineries, on O‘ahu as identified through review of various federal agency, and Hawai‘i and CCH department records is provided for reference and consideration.

#### **17. Significance of Effect on Established Public View Planes**

**Description:** Significance of effect on established public view planes for local communities

**Explanation:** A list of communities where public view planes could potentially be affected from development of the landfill site is provided for reference and consideration.